

Amendments to the Claims:

The listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claims 1-12 (canceled)

Claim 13 (currently amended): A method for reconstituting a non-human mammalian embryo *in vitro*, wherein said method comprises: comprising

(i) treating a the diploid nucleus of a somatic donor cell prior to its transfer into a recipient cytoplasm, said treatment consisting comprising:

- a) controlled proteolysis of non-histone proteins; and
- b) induction of an isomorphic swelling of said nucleus; and

(ii) transferring said nucleus into the cytoplasm of a recipient oocyte.

Claim 14 (previously presented): The method of claim 13, wherein the controlled proteolysis is produced by the action of a serine protease.

Claim 15 (previously presented): The method of claim 14, wherein the serine protease is trypsin or chymotrypsin.

Claim 16 (currently amended): The method of claim 13, wherein characterized in that the swelling of the nucleus is induced by treatment with a polyanion selected chosen from the group consisting of polyaspartic acids having a molecular weight of greater than 20,000 Da, heparin, and dextran sulfate and polyaspartic acids with a molecular weight of greater than 20,000 Da.

Claim 17 (currently amended): The method of claim 13, wherein the treated nucleus ~~treated~~ is contained in the donor cell, and the treatment comprises permeabilization of the cytoplasmic membrane of said cell.

Claim 18 (currently amended): The method of claim 17, wherein ~~the~~ permeabilization of the cytoplasmic membrane is carried out with at least one permeabilizing agent selected ~~chosen~~ from the group consisting of lysolecithin, streptolysin, saponin and digitonin.

Claim 19 (previously presented): The method of claim 13, wherein the nucleus is transferred into the recipient cytoplasm by microinjection.

Claim 20 (previously presented): The method of claim 17, wherein the nucleus is transferred into the recipient cytoplasm by fusion of the donor cell and of the recipient cytoplasm.

Claim 21 (previously presented): The method of claim 20, wherein the fusion is carried out by electric shock.

Claim 22 (previously presented): The method of claim 13, wherein the recipient cytoplasm is in the interphase state.

Claim 23 (previously presented): The method of claim 13, wherein said mammal is an ungulate.

Claim 24 (currently amended): The method of claim 23, wherein the ungulate is selected from the group consisting of bovine, ovine, caprine, and porcine ~~Bovini, the ovine race, members of the goat family and pigs.~~